



ORANGE COUNTY AMATEUR RADIO CLUB  
P.O. Box 95, Orange, Ca. 92669

Volume XIII. No. IX

Next Meeting: 17 November, 1972

### 1972 Club Officers

Pres:	Ron Cade - WA6FIT	897-8059
V. Pres:	Bob Eckweiler - WB6QNU	639-5074
Sec:	Richard Nelson - WA6OBM	557-6614
Treas:	Frank O'Leary - WB6TBU	539-1769
Activity:	Kiyoshi Yamachita - W6NGO	538-8942
T.V.I.:	Bill Robinson - WB6WOO	542-7958
Mem:	Ernest Duebendorfer - WB6VOV	539-6469
Pub. Rel.:	Lee Farnsworth - WB6FKD	542-4846
M.A. L.:	Bill Hall - WB6CQR	638-0101
	Ken Konechy - W6HHC	541-6249
R.F. Ed.:	Richard Nelson - WA6OBM	557-6614

#### OCABC ACTIVITIES

<b>MEETING</b>	3rd Friday each month, 7:30 p.m. AT the Mercury Savings and Loan, 1095 Irvine (4th) Blvd. in Tustin. Guests welcome.
<b>BREAKFAST</b>	1st Saturday each month, 8:30 am at Mannys Restaurant, 17th Street near Newport Freeway, Santa Ana. Meets in back of room.
<b>15 M NET</b>	Club Station W6ZE, meets every Thursday at 21.375 ( $\pm$ QRM) MHz. at 8:00 p.m. All amateurs welcome to check in. Club and ARRL Bulletins read.

### THE V.P. SPEAKS:

Where Is Our Club Going? I've been a member of the O.C.A.R.C. since Ken, W6HHC invited me to Field Day back when the Cemetery was our site. The one big problem that I've always felt plagued this club for as long as I've known it is lack of participation. One member I know cries loudly for better programs and most expensive raffle prizes. However he never buys a raffle ticket unless the grand prize is something he really needs and when asked to help with a program that would be of interest to the members did nothing. This sort of thing puts the burden of running the radio club on so few (many who like myself have other important things to do too.) Next year lets get more participation from all the members so the job will be easier for all and the club one that is more fun to be in. I belong to a sports car club too, and each month a large group of people show up to put the newsletter together. We all have a lot of fun doing it and find there are more articles than space in our 8 page newsletter. R.F. could be done the same way.

SO THIS COMING YEAR IT IS YOUR RESPONSIBILITY, NOT THE BOARD MEMBERS ONLY, OF GETTING PROGRAMS YOU'D LIKE, HELPING WITH ACTIVITIES, FINDING GOOD RAFFLE PRIZES AND PUTTING OUT R.F.

FIELD DAY Congratulations, our score appeared in QST this month as first in the 3A class for California. We are even noted in the 'CLASS A CALL AREA LEADERS' box on p.57. I didn't see any of our worthy opponents for the F.D. plaque with a higher score so maybe the plaque will hang on our wall again.

LAST MEETING we had Bill Reed of Pacific Telephone give us a show on lasers. He

V.P. Speaks Cont.

showed us a movie and then gave some interesting demonstrations and told of things to come. One demonstration was of a laser produced photograph called a hologram. The picture was of a clock with a dime store magnifying glass placed a few inches in front. The part of the clock seen thru the magnifying glass was magnified of course but as you moved your head so other parts of the clock were lined up with the magnifying glass they also appeared enlarged too. Bill had to open the box to prove the clock and glass weren't really behind the hologram. Of course they were in three dimensions. It's too bad the turn out was so small, I mentioned about 30 guests to Bill and only 8 showed up. What really hurt about this was that I called everyone on the phone 'cause R.F. couldn't be put out in time! But many of the members who said they were coming didn't. If you weren't called either you're not on the list, weren't home or someone didn't relay the message. I left messages for someone if they were home.

R.F. needs a new editor. Rick Nelson who's done such a fine job this year has some tough engineering courses he's taking at USC and just doesn't have enough time though he says he'll still write a few articles. Thanks Rich for a job well done. I've volunteered to finish R.F. for the year for Rich and except that perminate will be spelled permanent and there will be no more off color Polish Jokes (Right George?) things will be the same.

'QNU

# Hamlin Creates Temperature-Sensitive Reed Switch

A compact switch assembly, a scant 1/4" in diameter, opens to break a circuit when a predetermined ambient temperature is reached. Once the temperature drops below a predetermined point, the switch automatically closes to reset itself.

The assembly is extremely simple, consisting of a reed switch surrounded by two annular permanent magnets and a shunt. The only moving part of the entire assembly are the reeds of the switch -- rated to operate 50 million times or more.

A magnetic field actuates the switch. The temperature sensitive element is a specially formulated material that acts as a shunt between magnets. At temperatures below its Curie point, the ferromagnetic shunt completes a magnetic path that causes the reed

switch to remain closed. As the Curie point is reached, the high reluctance inhibits the passage of flux. The flux pattern changes, dividing the field into two ineffective magnetic fields. With the magnetic force broken up, the reed switch opens.

A decrease in temperature will eventually restore the ferromagnetic characteristics of the shunt, re-establish the single magnetic field, and cause the switch to close.

Opening and closing temperatures of these switches are not adjustable, but by special formulation of the shunt material, almost any desired Curie point can be attained, and switches can be produced to operate at temperatures of up to 300 degrees C. Hamlin now offers stock units in two ratings: the TS-

50 opens at a nominal 50 degrees C (122 degrees F) and the TS-70 opens at 70 degrees C (158 degrees F). Tolerance on opening is plus or minus 5 degrees C. Both are rated for 110 VAC at .050 amps or 28 VDC at .100 amps.

For further information on temperature-sensitive reed switches, write Hamlin, Inc., Lake Mills, Wisconsin, 53551. Phone: (414) 648-2361.

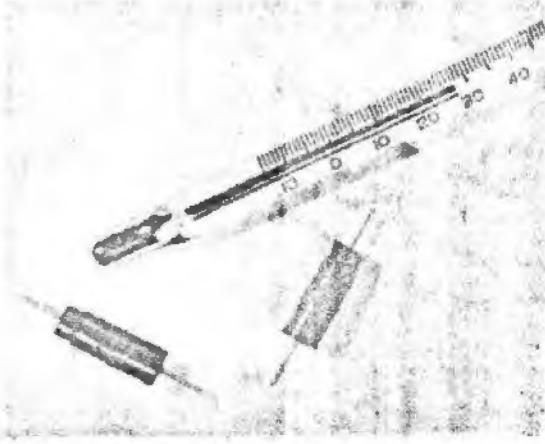
## GENERAL SPECIFICATIONS

### ELECTRICAL CHARACTERISTICS

Contact Arrangement	SPST-NC
Switching Ratings	DC 28V 100 mils AC 110V 50 mils
Actuate Time	3 C lag when monitoring temperatures rising at 20C per minute

### THERMAL CHARACTERISTICS

	TS-50	TS-70
Nominal Open Temperature	50 C	70 C
Open Temperature Tolerance	±5 C	±5 C
Reset Differential	10 C max.	10 C max.
Unit Repeatability	±0.5 C	±0.5 C



## BITS AND PIECES

Well "RF" has not been to press for a month and some sort of explanation is in order. For those who attended the last meeting I explained that I was not able to continue putting out "RF" due to my going back to school in the evening. I am taking seven units at two schools (3,4) and time and money doesn't allow me to spend any time other than studying. At 82 dollars per unit at USC I can not afford to flunk too many classes Hi!.

73 WOW For those of you who don't receive 73 magazine you should see the November issue. It is 321 pages and is crammed with articles on FM etc. News stand price is \$1,50.

Surplus Some time ago I mentioned a new outfit in Columbia. Mo. by the name of Solid State Systems, Inc. I had questioned their prices and wondered if they would be around for very long because they were so low, guaranteed, and no minimum. Well that was last May and I see that they are still advertising in 73 (Nov '72 p. 292) but one part of their format of the ad has changed. Their name and address is so small that you have to really look to find it. I estimate the print to be .047" high, about half the std. type.

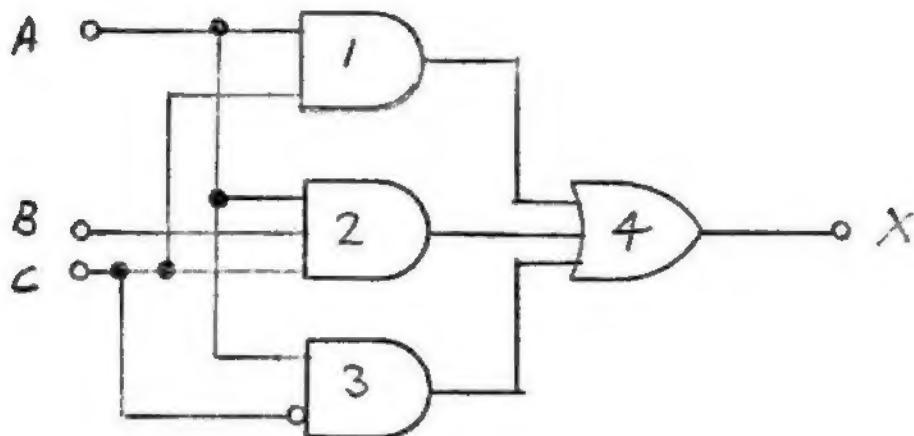
Program Congratulations to Bob, QNU for getting such a fine program for last meeting. It is such a shame that so few members showed up even though all members on the official list were called by phone in lieu of an "RF".

Logical? I am taking digital design for computers and if you know someone who thinks he is a wiz kid on the subject give him this problem. The circuit is described by the following switching algebraic equation.

$$X = AC + ABC + A\bar{C}$$

### Bits and Pieces Cont'd.

The circuit is given below.



The snubbed nose figure is an AND gate and the pointed one is an OR gate. Check your notes from our program that was given earlier in the year by Ken. The circuit performs a very common and usefull function in electronics and is used by all readers of "RF". It is a buss wire running from point A to X. B and C are immaterial.

Regulators Many companies have come out with 3 terminal regulators providing up to one Amp. at all the standard voltages. These devices allow excellant powersupplies to be made for only an AC voltage, 4 diodes, the regulator, and a filter capacitor. You can't beat that. Fairchild has their 7800 series, and National has a series. Reference "RF" Dec. '71 p. 3 for typical connections. Both positive and negative voltage regulators are available and cost is reasonable at about \$1.50 in the plastic package. You can't get such ripple reduction and regulation any cheaper way, and it is a plug and go approach. If higher currents (up to 10 amps) are required a single transistor can be added to get the current up to the required level.

Freebe 2N1560 transistors are still available

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First Class Dated Mail  
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